



Philosophical Transactions

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Mettal, and presently glides it along with it self to the Springs orifice, and from the moment of the Sulphur and Acide Salt's meeting and contact begins a mutual action and reaction upon one another which never ceateth; till both are imperceptibly spent, and blended into a new Body, which then the water lets fall, and we call an Earth, Ochre, or Sediment: After the production of which Ochre, the Medicinal vertues of the immature Sulphur is lockt up into the inseparable embraces of the Acide Salt, and so is lost, or at least disappears. But this mutual action and reaction may last, till the Waters issue out of the Earth, and for some small time longer, and so long their Medical vertues are to be imparted, and no longer.

This, Sir, is the Hypothesis of *Tachenius* (if I rightly apprehend him) which I send, not to have it Justle out the more received one, or any other that may be proposed; but that it may have its Tryall, and accordingly may live or dye. I could alledge more in its behalf, especially in the particular of such a Body, as we commonly call an *Ochre*; resulting from divers Experiments of Vitriol: but I have trespassed too much already to hope for pardon from any, but &c.

An Account of two Books

I. *GUAGING EPITOMISED*, by MICHAEL DART. London, Printed by W. Godbid 1669. upon one folio page.

A Table of Squares and Cubes is of general use, but more particularly in *Guaging*, for taking away *Proportional* work in computing the Contents of Brewers Tuns from inch to inch, or by as great portions as you please; or for making the Tables of Gallon-measure for Mr. *Oughtreds* Guage-Rod: Yea each kind of Table doth much expedite the *Guaging* of *Caske*, as may be seen in this Printed Sheet of Mr *Dart*, wherein he supposeth, that a Beer or Ale-Gallon contains (according to the late Establishment by Law) 282. Cubical inches; a Wine-Gallon, according to custom and Experiment, 281. Cubical Inches: And he takes an Example (of a *Canary* P.p.) whose diameter at the ^{Bottom} Head } is { 32 inches, and Length 44 inches.

And

And if you suppose the Heads of such a Cask to be two Plains erect to the Axis, and alike remote from the Center, cutting off both ends of the figure produced, then, if the middle *frustum*, so intercepted, be computed as

		The Content in Wine Gallons is about			
The	{ Solid Zone }	a {	Spheroid	126 $\frac{1}{2}$	
			Parabolical	115 $\frac{1}{2}$	
			Spindle.		
		two {	Cones.	Of the same base and height	110 $\frac{1}{2}$
			Parabolical		112 $\frac{1}{2}$
	{ Trunci. }		Conoids		

the Method of Calculation being very easy by either sort of Tables, and of great affinity in all these figures. And whereas the Learned have commonly supposed, Cask to be the middle *frusta* of *Spheroids*, and given Rules accordingly for Gaaging them, those suppositions, as Vintners and others upon experience assert, are found too much to enlarge the Capacity, so that a *Canary* Pipe, that is reputed to hold about 126.gallons, upon Experiment hath been found to contain but 116.gallons: And to determine, what figure is most proper to be admitted, ought to be built upon such an Experiment as this;

Conceive a Caske to lye upon an Horizontal Plain with its *Axis* parallel thereto, and Perpendiculars on the outside of the smooth boards of the Cask to fall, from the Head, Bung, and some intermediate point between, upon the Plain or Floor; and in like manner the axis to be designed: Then find out such a curved line of some property, that may pass thorough the said Points, which conceive to have a rotation about the *Axis*: the round solid so made may be taken to represent the Cask; and in the Writings of *Geometers* divers Curves are to be found, that are capable of passing through such Points and their round Solids measured. But if the Reader think this too nice and troublesome, and that the *Spheroid* way is too great, and the *Parabolick* spindle too little, then the Author gives scope enough between, showing how to contrive such Rules, as shall best agree with Experience.

II. HISTOIRE NATURELLE DES ANIMAUX
PLANTES ET MINÉRAUX, qui entrent dans
la Composition de la THERIAQUE D'ANDROMA-
CHUS; par M. Charas In 12. A Paris.

AS there are above 60 sorts of different druggs, which are ingredi-
ents of this no less difficult than famous and usefull Medicine, which
was invented by *Andromachus*, Physician to *Nero*; and as those drugs are
subject to be sophisticated, and require different preparations, so there are
few men, that are sufficiently skill'd to chuse aright all those ingredients,
or dextrous and patient enough to prepare them well. The Author of
this Book treats of this celebrated medicament, and not only teacheth
the way of composing it, but intersperseth many not in considerable re-
marks touching the nature and vertues of all the Druggs, which com-
pose it.

He is of opinion, that commonly there are committed many faults in
preparing the Ingredients, of which the Theriack is made up. E. g.
When the Vipers are prepared, the custom is to whip them; thereby
to make all the venom go to the head, which is cut off when they are
sufficiently enraged. They also boile the flesh, thereby to draw forth what
venemousness may yet rest therein, and their bones are cast away as use-
less. Whereas he saith, that it being by Experience evident, that all the
venom of the Viper is in his Teeth and Jaws, that whipping is not only
to no purpose, but also dangerous, in regard that the Spirits being cha-
fed and irritated may beget venom in the body, where was none. He as-
serts also, that the water, in which the viper-flesh is boyled, carryes a-
way all the vertue; and that the bones that are thrown away are no less
useful, than the flesh itself.

He takes further notice, that *Opium* hath not those ill qualities, which many as-
cribe to it, who teach, that it suffocate the natural heat, and that there need no more
than 3. graines to dispatch the lustiest man; whereas he assures, that himself hath taken
6 graines of it without having been more stupified by it, than he used to be; and that
instead of being debilitated, he hath found himself strengthened by it. He adds, that he
knows a man of a constitution delicate enough, who hath taken of it to 30. grains, and
yet not found any troublesome accident upon it; on the contrary that the Patient hath
found himself so well after it, that he continued to take the same dose twice or thrice a
week.

He observes also, that whereas it hath been disputed, what might cause the difference
of Colour in the White and Black *Pepper*, some believing, that *Pepper* gathered before it
was ripe, looked white, but became black in ripening; others pretending, that as the same
Vine-stocks, which produce white grapes, do not bear black ones, so they are different
plants; that bear *Pepper* of different colour; our Author affirms, that this diversity of Colours
proceeds thence; that the black *Pepper* is covered by its skin, which the white is bared of &c.

E R R A T A in Numb. 51.

P^{Ag.} 1028. l. 7, r, by a bank of. *ibid.* l. 9. r. preserve this bank. p 1039. l
33. r. bottles well sealed up.

Printed by T. N. for John Martyn Printer to the Royal Society, and are to be
sold at the Bell a little without Temple-Bar, 1669.